



All Databases

PubMed

Nucleotide

Protein

Genome

Structure

OMIM

PMC

Journals

Books

Search for
[Limits](#) [Preview/Index](#) [History](#) [Clipboard](#) [Details](#)
Display Show Sort by Send to All: 1 Review: 1

About Entrez

Text Version

Entrez PubMed

Overview

Help | FAQ

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journals Database

MeSH Database

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

Special Queries

LinkOut

My NCBI

Related Resources

Order Documents

NLM Mobile

NLM Catalog

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

ClinicalTrials.gov

PubMed Central

 1: [Semin Interv Cardiol. 1996 Sep;1\(3\):215-23.](#)

Related Articles, Links

Methods of local gene delivery to vascular tissues.

March KL.

Krannert Institute of Cardiology, Indianapolis, IN 46202, USA.

march@kimal.dmed.iupui.edu

The development of methods employing the introduction of new genetic material for therapeutic applications in the cardiovascular system is dependent not only on the evolution of molecular vectors, but also 'mechanical vectors' encompassing a variety of mechanisms and approaches for the delivery of vectors or vector-modified cells to anatomical regions of interest. A significant challenge lies in the evolution of mechanical devices capable of highly efficient, localized and homogeneous delivery. Each of these three characteristics, though very desirable, remains generally elusive for several kinetic and physical reasons. Recently developed devices which render possible minimally-invasive peri- or epivascular delivery may provide advances in these aspects of delivery.

Publication Types:

- [Review](#)
- [Review, Tutorial](#)

PMID: 9552514 [PubMed - indexed for MEDLINE]

Display Show Sort by Send to

[Write to the Help Desk](#)

[NCBI](#) | [NLM](#) | [NIH](#)

[Department of Health & Human Services](#)

[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)



A service of the National Library of Medicine
and the National Institutes of Health

My NCBI [\[Sign In\]](#) [\[Register\]](#)

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books

Search for

Limits Preview/Index History Clipboard Details

Display Show Sort by Send to

All: 1 Review: 1

About Entrez

[Text Version](#)

Entrez PubMed

Overview

[Help | FAQ](#)

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journals Database

MeSH Database

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

Special Queries

LinkOut

My NCBI

Related Resources

Order Documents

NLM Mobile

NLM Catalog

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

[ClinicalTrials.gov](#)

PubMed Central

1: [Curr Opin Mol Ther. 2003 Aug;5\(4\):345-50.](#)

[Related Articles](#), [Links](#)

Stimuli-responsive gene delivery vectors.

Oupicky D, Diwadkar V.

Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI 48202, USA.
oupicky@wayne.edu

One of the major limitations to efficient gene delivery mediated by synthetic non-viral vectors is the presence of various barriers between the site of administration and localization in the cell nucleus. Each of the barriers often demands significantly different properties from the vector. Delivery vectors that can recognize changes in the environment and that are capable of actively responding by altering their properties or behavior are therefore being developed to address the challenge of integrating the sometimes contradictory characteristics necessary for effective gene delivery. This review discusses recent developments in the area of gene delivery vectors capable of responding to various endogenous and exogenous stimuli by changing their properties or behavior.

Publication Types:

- [Review](#)
- [Review, Tutorial](#)

PMID: 14513676 [PubMed - indexed for MEDLINE]

Display Show Sort by Send to

[Write to the Help Desk](#)

[NCBI](#) | [NLM](#) | [NIH](#)

[Department of Health & Human Services](#)

[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)

Nov 15 2005 04:49:13